



Flood Mitigation and the NC Land and Water Fund

**Senate Select Committee on Storm Related River Debris and Damage in
North Carolina - April 13, 2021**

Will Summer – Deputy Director, NC Land and Water Fund



NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

North Carolina Land and Water Fund (NCLWF)



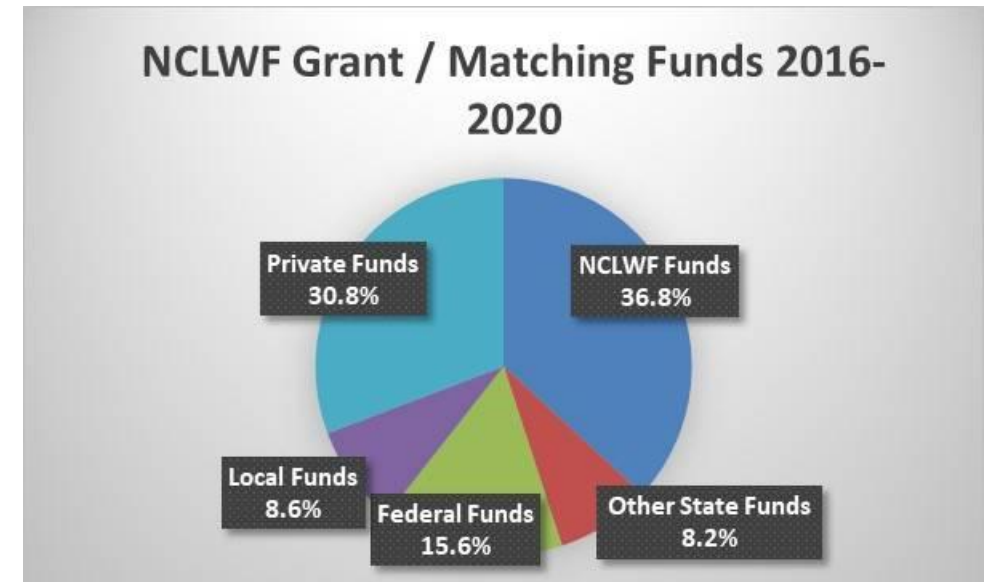
2019 – Senate Bill 381



NCLWF has been investing the in the protection and restoration of our natural and cultural resources for 25 years.

NCLWF Process

- Annual grant cycle
 - Applications due in February
 - Awards are made in September
- Projects are reviewed by staff and scored using an objective ranking system
- Trustees discuss and vote on the projects in open meetings
- 9-member Board of Trustees
 - Appointments made by:
 - Governor
 - Senate President Pro Tempore
 - Speaker of the House
- Leverage other funds 2:1, mostly private and federal
- Our grant program is voluntary



NCLWF Partners:

State Agencies



Local Governments

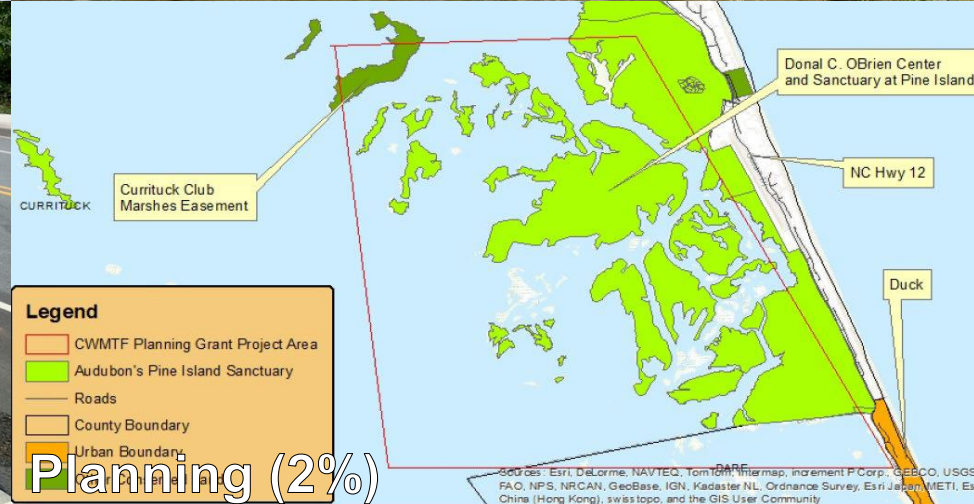


Non-profit Organizations



NCLWF Grant Program Areas

Four basic project types we fund:



NCLWF Grant Program Areas: Land Protection



Stream Buffers and Floodplains



Natural Heritage



Historic and Cultural



Greenway Acquisition



NCLWF Grant Program Areas: Land Protection

Impacts on Flood Mitigation and Resiliency: Preserve Floodplain Function

- Intact, forested flood plains and wetlands are part of the natural flood mitigation infrastructure
 - Store and infiltrate more rainfall
 - When flooded, water can spread out and slow down in the floodplain
- This reduces the flood peak downstream -> less flooding
- We have protected 165,000 acres of undeveloped floodplain over our 25-year history



Waccamaw River, Columbus County



NCLWF Grant Program Areas: Land Protection

Impacts on Flood Mitigation and Resiliency: Keep People and Structures Out of the Way

- All of the aforementioned acres will never be developed or suffer any major economic impacts if they are flooded
- Less commonly, our funds have been leveraged with FEMA dollars for floodplain buyouts to help get more people out of harms way permanently



Dog Park and WRC Boat Access on buyout land – Kinston



NCLWF Grant Program Areas: Land Protection

Impacts on Flood Mitigation and Resiliency: Public Recreation Opportunities



Creeper Trail Park – Lansing



NCLWF Grant Program Areas: Restoration



Stream enhancement



Stream restoration



Wetland restoration



Living shorelines



NCLWF Grant Program Areas: Restoration

Impacts on Flood Mitigation and Resiliency: Increase connection to the floodplain

- One of the primary goals of many stream restoration projects is the reconnect the stream to its floodplain
- Like floodplain protection, this increases the water storage in areas where it can do less harm and reduce the peak down stream



Stoney Creek - Goldsboro



NCLWF Grant Program Areas: Restoration

Impacts on Flood Mitigation and Resiliency: Large Scale Wetland Restoration

- Lux Farms (Hyde County) – 1,400-acre wetland restoration



NCLWF Grant Program Areas: Restoration

Impacts on Flood Mitigation and Resiliency: Public Health

- NCLWF has partnered with the Division of Soil and Water Conservation to fund five phases of the voluntary Swine Floodplain Buyout Program
- Farms with operations in the 100-year floodplain are eligible; lagoons and feedlots are removed; lagoons are emptied; floodplain and riparian buffer are permanently protected



NCLWF Grant Program Areas: Innovative Stormwater

Impacts on Flood Mitigation and Resiliency: Reduced Flooding/Standing Water

- Pine Knoll Shores has several areas where flood water can stand for long periods of time in residential areas, among other things inundating septic fields
- Rather than wait for the areas to flood and then pump polluted water into the sound, they have developed an alternative strategy: Pump the groundwater down ahead of the storm and use golf course ponds to store/treat it before getting to the sound.



NCLWF Grant Program Areas: Stormwater*

Impacts on Flood Mitigation and Resiliency: Reducing peak storm flow

- *Prior to 2013, NCLWF had a larger footprint in the stormwater arena
- Changes to our statute in 2013 removed one of our purposes specific to conventional stormwater (“Innovative” stormwater language is still present)
- Under that program, we awarded grants to design and construct “conventional” stormwater measures to improve water quality
- The 42-acre Jack Smith Creek Stormwater Wetland can hold 5 million gallons; large pumps can move water away from nearby flood prone neighborhoods



Jack Smith Creek Stormwater Wetland – New Bern



NCLWF: Restoring Floodplains and Wetlands

- Added to NCLWF Purposes in 2019, per SB 381:

“(12) To protect and restore floodplains and wetlands for the purpose of storing water, reducing flooding, improving water quality, providing wildlife and aquatic habitat, and providing recreational opportunities.”



NCLWF Demand and Funding

- Current recurring appropriation for grants is ~\$13.2M, with an additional ~\$5M from license plate revenue
- Program demand has averaged \$75M annually in recent years
- Governor's Recommended Budget has a NR \$30M to support NCLWF and an additional \$19M that would specifically support floodplain buyout and restoration projects
- Bills have been filed in the Senate and House supporting similar funding for this type of work



NCLWF and Flood Mitigation: Recap

- For 25 years, we have been charged with improving water quality via natural systems.
 - Protecting land adjacent to streams (floodplains)
 - Restoring streams and wetlands
 - Addressing stormwater quality issues
- These projects also address water quantity (flooding)
- We have also participated in projects designed to move people and infrastructure out of harm's way via various buy-out projects

Bottom line:

We have the tools and demand to do more work, we have an accountable and transparent process, we are ready for additional resources.

